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ABSTRACT

As background to a summary of the study sponsored by the American Association of Community and Junior Colleges (AACJC) and the American Vocational Association (AVA), postsecondary education is discussed in terms of articulation; federal incentives for expanded facilities and training opportunities; pressures for planning, surveys, budget justification, and improved performance as related to the increase of centralized state control; philosophical barriers between community colleges and vocational centers; credentialing students; legal and political influences on governance; enrollment trends; and funding patterns. The study attempted to identify policies and procedures that help or hinder articulation; develop recommendations for federal, state, and local jurisdictions to promote cooperative working relationships; disseminate the findings; and establish a mechanism to foster continued cooperation between AACJC and AVA. From materials gathered from a nationwide survey focusing on administrative practices which facilitate or impede articulation, five case studies were prepared representing successful articulation at institutes of different size, wealth, tradition, type of control, and with different student needs. Governance, curriculum development, and financing are considered for each program. Resulting recommendations concern finance on both state and federal levels, data systems, credentialing and credits, the role of vocational education, and planning. (MB)

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AACJC / AVA JOINT STUDY

COOPERATION IN VOCATIONAL EDUCATION

JC 790 060

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Executive Summary of the Joint Study by the American Association of Community and Junior Colleges and the American Vocational Association on cooperation in the vocational education field.

By David S. Bushnell
Director, Joint Study Project

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FOREWORD

To some educators, the connection between vocational education and the purposes of liberal education seems tenuous at best. However, the classic nature of the debate between those who stress the instrumental nature of education for participation in society, and those who believe in liberal learning as an end in itself, with no eye to education's utilitarian value, has shifted. The issue now is what can both vocational and liberal education contribute and how can they best serve people's needs at various age levels.

The emergence of lifelong learning as a feasible concept has forced a reappraisal of the interdependency of business, industry and educational institutions. The problem is how to make institutions more responsive to societal needs at various stages of the living, working, learning cycle. Vocational education and training is being looked upon by the government as its principle strategy for moving nonproductive citizens into productive roles. Questions are being raised as to whether entry level job training should concentrate on qualifying a trainee for a job or for career advancement as well. Educational institutions and commercial organizations need to commit themselves to cooperation and communication before such questions can be answered. This means that articulation mechanisms will be under great stress, since a union of the world of education for work and the academic world will require many new cooperative alignments. It will also require systematic infusion of career information at every stage of working and learning.

Of special interest are the methods educational leaders have devised to accommodate and join the programs of different institutions to meet the needs of their clienteles. Even though the U.S. Congress and state legislatures favor cooperative efforts, federal and state regulations have in the past tended to create separate governance structures for postsecondary and secondary programs. In some instances, this has brought about unnecessary program duplication and jurisdictional disputes. The 1976 Vocational Education Amendments with their provisions for joint planning are helping to resolve this problem.

There are a number of local institutions which have successfully pioneered ways to articulate their programs with other institutions. This has resulted in a more efficient and effective use of vocational education community resources and a greater breadth of program offerings. Undoubtedly, increased public pressure for access to vocational programs, coupled with limited appropriations for education in general, will speed these efforts. When budgets are tight, articulation may well be the best means to significantly cut costs without reducing program quality.

Because the potential benefits of successful articulation are considerable, the American Association of Community and Junior Colleges and the American Vocational Association joined forces in a study, funded by the U.S. Office of Education, that was designed to: (1) identify policies and procedures that help or hinder cooperation; (2) develop recommendations for federal, state, and local jurisdictions to promote cooperative working relationships; (3) disseminate the findings as widely as possible; and (4) establish a mechanism to foster continued cooperation between AACJC and AVA. This summary report is one of the products of that effort.

A nationwide survey was conducted to pinpoint the policies and administrative practices which facilitate or impede cooperation. A sample of 22 locations throughout the country was drawn up and interviews conducted to document and publicize a series of case studies on successful articulation. Reporting the survey findings and the case studies became the basis for five regional conferences held in 1977-78. Each regional conference generated a set of recommendations for consideration at a national conference convened in February 1978. More than 500 state and local officials participated. It is to them that this summary report is dedicated.

Gene Bottoms, Executive Director, American Vocational Association, Edmund J. Gleazer, Jr., President American Association of Community and Junior Colleges

PREFACE

During the 1976 presidential campaign, a survey of opinion leaders by the nonpartisan, nonprofit Public Agenda Foundation reported that the dominant concern in America was the trend "toward a psychology of self-interest so all embracing that no room is left for commitment to national and community interests... that in the pursuit of their organizational goals, the politicians and the businessmen, and the unions and the professions have lost sight of any larger obligation to the public and are indifferent, or worse, to anything that does not benefit — immediately and directly — themselves or their institutions."

In an attempt to rekindle and recapture some part of the spirit of community which characterized our society's growth and success, the American Association of Community and Junior Colleges (AACJC) and the American Vocational Association (AVA) joined together in the pursuit of a common goal — the promotion of closer cooperation among themselves as well as the institutions they represent.

This executive summary of the larger study report is intended to communicate the highlights of that cooperative venture, hopefully in a manner that will motivate the reader to explore further. Those wishing to dig deeper into the subject can do so by writing Resources in Vocational Education, Center for Research in Vocational Education, Columbus, Ohio, or the AVA for a copy of the full report. Both reports are offered in the hope that bridges already built or under development can be duplicated and expanded across the nation.

Many people contributed to the successful conclusion of this study. Foremost, were the chief staff officers of both Associations: Edmund J. Gleazer, Jr., president of AACJC, Gene Bottoms, executive director of AVA, Richard Wilson, vice president for programs of AACJC, and Dean Griffin, associate director of AVA. My thanks to them and to Lowell Burkett, formerly of AVA, for demonstrating the true value of collaboration.

The two Association Boards, the National Advisory Council, and various colleagues and project officers at the U.S. Office of Education gave this project their highest priority.

I am especially indebted to Barbara Link for her role in all phases of the study. Without the help of Jean Levin and Janet Steiger of The Work Place, a bulky document might never have been digested to summary form. William Harper and Martha Turnage of AACJC also provided valuable counsel on the content. Roger Bezdek, Carolyn Carroll and Robert Corcoran contributed consulting services at various phases of the study.

Any errors of fact or interpretation are the responsibility of the principal investigator and not his associates.

David S. Bushnell, Director
AACJC/AVA Joint Study

POSTSECONDARY VOCATIONAL EDUCATION

THE EXPLOSIVE GROWTH of postsecondary vocational education is one of the most significant developments in education during the past three decades. Since 1947, enrollments in secondary and postsecondary education have grown sixfold, from 2.5 million to 15.3 million. The rate of increase in postsecondary programs has led the way. According to the Bureau of Occupational and Adult Education, U.S. Office of Education, postsecondary vocational enrollments increased from 144,000 to almost two million between 1963 and 1975, a thirteenfold increase.

There has been a parallel growth in the number of institutions involved in postsecondary vocational education. In 1965, 670 public vocational schools across the nation provided such training; by 1975, 1,100 did so. Public community colleges offering degree and non-degree programs increased from 565 in 1965 to over 1,000 by 1975, and this figure does not include the universe of private and proprietary vocational schools which have experienced similar growth.

Prior to World War II, most post-secondary occupational training was provided by private trade and technical schools, hospitals and technical institutes. The shift of responsibility for vocational training from the private to the public sector, with a corollary increase in enrollments in public institutions, has been influenced by several factors: technological changes in job requirements; demand for equal access to educational opportunities; expanded federal and state support for new vocational education programs; and a surge in the numbers of those seeking entry or reentry into the work force through additional education.

In the early 1960's, confronted with a great bulge in the student-age population and a set of critical national manpower needs, Congress passed significant federal legislation to stimulate the expansion of vocational education. Between 1965 and 1974, $18.3 billion was authorized at the federal level for vocational facilities, training, planning and operating costs, and matched by billions more at the state and local levels.

The results of these expenditures have been mixed. Access has been provided for millions of students for which there had been little opportunity in the educational system, and skilled manpower pools for new jobs have been developed. In this expansionary period, however, overbuilding, duplication, waste and vigorous competition among institutional providers of vocational education developed, unchecked by coordination.

By the mid 1970's, a period in which enrollments leveled off and in some cases declined—accompanied by financial uncertainty-an intensifying spiral of demands began to pressure governments at all levels to coordinate their response to vocational education needs. Even as the real purchasing power of the education dollar shrank, the grim statistics on high unemployment among youth and among minorities continued to climb. At the same time, as more and more students enrolled in postsecondary occupational education programs, employers imposed increasingly higher educational attainment requirements for diminishing numbers of entry level jobs, many of which had required little more than a high school diploma in the past.

Against this background, state, local and federal governments in turn began pressuring the providers of occupational education to deliver more effective and efficient programs. The persistent rise in operating costs had now outstripped increased enrollment, and the lack of coordination among and between institutions became anathema to cost-conscious legislators and taxpayers who demanded both accountability and better program coordination. Vocational educators themselves began to call for more precise definitions of the roles of the various types of institutions in meeting educational needs. They realized that unless the vocational education community "is prepared to differentiate among the distinctive missions of distinct sectors... we will vitiate our strength and lose credibility." The by-word had become "articulation.".

ARTICULATION

In its classic use as an education term, articulation is defined as a planned process linking two or more educational systems within a community to help students make a smooth transition from one level

of instruction to another or between programs and institutions without experiencing delays or loss of credit. For the purposes of the AACJC/AVA joint study, articulation has been given a broader meaning, however. It refers to the process of fitting vocational education into the larger community. Effective articulation is not a system, but many systems within and among institutions providing vocational programs. It can take several forms: cooperation between secondary and postsecondary institutions; between area vocational schools, technical institutes and community colleges; between education and work and work and education; between two- and four-year colleges; between local, state and federal programs, and even within institutions. Articulation requires educators at the local level to "discover, establish and continually improve relationships between policies, plans, procedures, programs and people." In short, articulation depends on the smooth and efficient interface of all educators and education programs providing vocational education in a given area.

While cooperation among educational institutions in this country is not unique, it has emerged very recently as an administrative strategy for coping with rising costs and duplicative services in postsecondary vocational education. A brief look at the forces which have pressured for cooperation and articulation indicates that the need for an immediate response is urgent.

FEDERAL INCENTIVES

The passage of federal legislation has dramatically altered the student composition of the postsecondary universe in the past 15 years. Vocational education and manpower legislation developed in response to social concern for providing equal access to education and at once as a weapon to fight unemployment. Early federal measures concentrated on provision of incentives for expanded facilities and for training opportunities.

- The National Defense Education Act of 1958 (NDEA) provided assistance to the states for the improvement of area vocational programs and for technical training at the postsecondary level.
- The Manpower Development and Training Act (MDTA) of 1962 attempted to address problems of shortages in trained personnel, together with structural unemployment brought about by technological change.
- The Vocational Education Act of 1963 authorized states to develop new vocational programs on a state funding match basis in response to anticipated employment opportunities and the needs of people of all ages.
- The Vocational Education Amendments of 1968 required that programs be developed for minorities—as well as those with physical or mental handicaps.
- Following passage of the 1968 Amendments, further legislation (1969-1975) included provisions for bilingual vocational education, and for improving coordination and planning at state and local levels, and adding new dimensions to the issue of accountability.

DEMAND FOR COORDINATION

The Education Amendments of 1972 signaled a shift to the present stress on improving, coordinating and rationalizing state postsecondary education systems. The legislation established 1202 Commissions as state mechanisms to insure that postsecondary institutions such as community colleges, area vocational schools, technical institutes and proprietary schools would be adequately represented in the formulation of state-wide postsecondary education plans and policies. It created the Basic Educational Opportunity Grant program, (BEOG) which reflected congressional de-emphasis of institutionally-based support programs in favor of a direct grant system of student support, facilitating student choice.

The Comprehensive Education and Training Act of 1972 (CETA) was passed as emergency legislation with the hope that direct federal funding for jobs could help alleviate both structural and short-term unemployment. CETA required the states to improve planning in the use of all resources available to them for vocational education and manpower training. Under CETA, the State Manpower Services Council must be actively involved in the development of state vocational education plans; members of manpower councils must sit on vocational education councils. To promote further coordination of local vocational education and manpower training efforts, CETA prime sponsors are required to provide assurance of collaboration in annual applications for funding.

The Vocational Education Amendments of 1976 spelled out in greater detail the mandate for accountability and coordination between vocational education and manpower training programs. Though state and local school systems were permitted greater latitude in the use of federal funds (categorical grants were shifted to block grants), they were asked in turn to meet more stringent requirements regarding planning and reporting procedures. A major thrust of the 1976 act was to improve coordination between vocational education and CETA and significantly improve information concerning vocational education.

COMMON PRESSURES

The detailed federal requirements for planning, periodic surveys, compliance reports and budget justification, coupled w th demands for improved performance, have led to greater centralization of decision-making at the state level. But the pressures for such rationalization and coordination have not come from federal legislation alone. Each institution which provides vocational education faces a common set of serious external problems:

- slowly shrinking student populations in the 16-24 age bracket and the astonishing growth of an older part-time student population, which has created non-traditional demands for flexible scheduling and credit for prior experience;
- the economic realities imposed by inflation and recession, resulting in rising costs, and shrinking budgets for vocational education;
- Supreme Court rulings regarding admissions and formulas for the allocation of finances for institutions which have restricted funding options, in some cases;
- the rebellion of taxpayers against increases in state and local taxes. The search for solutions to these pressing problems has become a powerful stimulus for voluntary cooperation among institutions.

At the same time, all institutions providing vocational education share common internal concerns which also act as a force for cooperation: maintainance of up-to-date programs and staff; placement of graduates; assessment of job availability; and rapid response to changing employer requirements. Vocational educators have come to realize the value of a unified attack upon these shared problems.

However, in spite of all the forces pushing for articulation, serious philosophical, legal, political and funding barriers still exist.

PHILOSOPHICAL BARRIERS

Tensions between community colleges and area vocational technical centers have their roots in the classic early 20th century argument between Charles Prosser and John Dewey on the merits of education for specific job skills vs. education for broader lifetime adaptability to changing employment roles. Area vocational schools complain that community colleges require their students to enroll in unneeded courses in order to qualify for associate degrees. Community college spokesmen argue that students need more than entry level job skills to qualify for and advance in not one but multiple occupational areas.

Adherence to differing philosophies of education has influenced the structure of each type of institution. Historically, vocational schools have been organized on a hierarchial pattern with operational directives issued from the top by a strong central administration. Community colleges, in contrast, follow the less centralized governing practices of four-year colleges and universities, which allow greater faculty input into policy, staff selection and course offerings. Teachers in vocational schools have been expected, for the most part, to spend their time in the classroom; teachers in community colleges enjoy a greater degree of freedom in determining how they can or should spend their time. The vocational system requires that teachers be trained in a vocationally certified or approved manner with heavy emphasis on actual work experience; community colleges teachers are more often trained in the academic atmosphere of colleges and universities.

Even definitional problems have crept into the picture, helping to preserve the separation of vocational and liberal arts programs. What may be termed postsecondary in one quarter may mean something quite different in another. Occupational education tends to mean one thing to community college personnel and something different to those in vocational schools.

Such differences in institutional structure, philosophy and faculty training create serious communication problems which become barriers to cooperation and articulation. At the most basic level, it may be impossible to arrange a joint meeting of vocational educators, unlike their community college counterparts, unless funds are available for release time. Joint planning, even if it could be arranged, may be fruitless if philosophical differences cannot be bridged.

CREDENTIALING

Issues surrounding curricula and standards continue to separate vocational schools and community colleges. How can a vocational education institution, whether degree or non-degree granting, best prepare students for work? What program design constitutes a meaningful response to changing employer needs and still meets the long-range career concerns of students? Is it possible to identify learning experiences which differentiate between degree programs and non-degree certificate or diploma programs?

Failure to design standards acceptable to both types of institutions results in confusion as students seek to transfer credits, or gain credit for life experience. Failure of curriculum planners to agree on and understand the sequence of skills and job training activities that should be offered leads to duplication of course requirements and prevents any systematic inventory of programs. Until such questions are resolved, articulation may be impossible to achieve, and the costly waste of scarce resources continues.

LEGAL BARRIERS

Governance structures at the state level often arbitrarily differentiate between non-degree vocational occupational institutions and degree-granting higher education institutions. Teacher licensing requirements, budget review procedures, even curriculum offerings are frequently subject to state approval by different chains of command — one overseeing public vocational programs, the other degree-granting colleges. To complicate matters further, contracts with local proprietary schools for vocational course offerings may be prohibited by state laws which restrict eligibility to nonprofit entities. Local initiatives for collaborative agreements falter when confronted by such divisive regulations.

The confusion resulting from the 1202 Commissions mandated by the Higher Education Act of 1972 offers another example of a legal barrier to articulation. Although intended to act as an incentive for cooperation, the initial effect of the legislation created even more complex layers of administration for the planning and approval of postsecondary vocational programs at the state level.

POLITICAL BARRIERS

Attempted collaboration between established power bases inevitably results in conflict. CETA prime sponsors may view established public education programs as working at cross purposes to their federally mandated mission of immediate employment and on-the-job training for the unemployed. State legislators may feel pressured by their constituents to vote for vocational education facilities designed to serve a limited region, in spite of the fact that it is an unnecessary duplication from a state-wide point of view.

Advisory council members and administrators develop loyalties to the institutions they serve and may oppose collaborative efforts as evidence of a weakened power base. Without identification of boundaries at the state level to prevent overlap and duplication, articulation at the local level is difficult to achieve.

TRADITIONAL ENROLLMENTS

Ironically, while serving as an impetus to articulation in some ways, the decline in the numbers of persons of traditional age (18-24) enrolling in postsecondary schools and colleges has also acted as a barrier to communication. Shrinking student population has forced institutions to expand marketing efforts and to compete for new clientele. Existing post-secondary vocational education institutions have moved toward a common denominator of services, including counseling and guidance, remedial or developmental programs and adult continuing and basic education. The resulting duplication acts as one of the most serious roadblocks to the efficient use of resources.

FUNDING PATTERNS

The AACJC/AVA study examined in depth the major funding support models used by the various states in allocating monies to community colleges and vocational schools. Regardless of the model used, it was found that the support of the states often does not provide adequate funds nor allocate resources efficiently and may, instead, encourage duplication and competition. For example:

- States tend to provide funds based on a flat per student rate or a per student credit hour basis even though some credit courses cost two or three times more than others. This encourages institutions to offer the least expensive courses, irrespective of merit or local needs.
- Vocational education funds are often earmarked by category or specialty, which encourages course duplication between institutions.
- Some state funding formulas provide support for full-time students only; thus part-time students contribute nothing in the way of revenue from state funds even though they are the most rapidly growing segment of the post secondary vocational education population, and may have as much need for student services, such as counseling, as do the traditional student.

OTHER PRESSURES

Finally, local institutions are subject to pressures from employers and unions, accreditation commissions, professional organizations and other well-meaning groups whose special interests and sometimes parochial concerns often hinder efficiency and responsiveness. Industry, for example, wants well-educated self-motivated workers who are mature, work-ready and adaptable. At the same time, industry wants employees who are promotable, skilled at interpersonal relations and literate, with the result that educational institutions are pushed on the one hand to offer specific skill preparation, and on the other, to provide training in wider problem solving and learning skills. Older applicants are often preferred to those under 21. Vocational education providers, in short, face daily and conflicting demands from the the constituencies they attempt to serve.

Recognizing both the mandate for articulation and the barriers against it, AACJC and AVA determined to seek specific and transferable solutions through the identification of exemplary programs which demonstrate that articulation can happen.

AACJC / AVA JOINT STUDY

IN AUGUST OF 1976, AACJC and AVA agreed to joint sponsorship of a study identifying administrative practices and policies at local levels which have resulted in exemplary programs of cooperation and collaboration between and among institutions offering postsecondary, non-baccalaureate programs of occupational education.

The two national associations, although sharing overlapping goals and common interests, represent different constituencies in the field of postsecondary occupational education. In the past, cooperation between the two groups had been limited. The joint study was not only an attempt to foster and develop effective working relationships between community college personnel and vocational educators but to build lasting bridges between the two associations as well.

The four broad objectives of the study were:

- to identify the procedures and policies that facilitate cooperation;
- to develop recommendations that would promote cooperative interinstitutional and community relationships;
- to communicate study findings through regional conferences and reports; and
- to build cooperative links between AACJA and AVA.

Funded by the U.S. Office of Education, the AACJC/AVA study design included the identification and description of "successful" case studies from communities whose policies and practices seemed to facilitate such cooperation. To further the joint objectives of program identification and the development of working relationships between community college personnel and technical/vocational educators, a jointly appointed AACJC/AVA National Advisory Council was convened in January, 1977. Composed of practitioners and research oriented specialists with vocational, community college and adult education backgrounds, the council established ten criteria to be applied in the selection of examples of cooperative arrangements:

1. The existence of formal or informal agreements between two or more local institutions stating how such institutions should collaborate in their efforts to provide support for postsecondary vocational education.
2. The use of criterion referenced tests or other systematic assessment procedures making it possible to offer course credit to students and adults who have already acquired specific knowledge and skills in a given vocation.
3. Closely related to giving credit for already acquired knowledge and skills is the willingness of local institutions to accept the transfer of credits from another institution.
4. The use of follow-up surveys to ascertain how well students in those occupations for which they have been trained are doing.
5. The existence of joint planning committees and joint membership in advisory committees.
7. The joint sponsorship of community need surveys.
8. Procedures whereby key staff are provided release time to participate in joint planning sessions.
9. Shared counseling and job placement programs.
10. Budget and program planning procedures giving key administrators the opportunity to review each other's budget requests.

To ensure the widest possible participation and cooperation in the study, nominations of "exemplary programs" meeting these ten criteria were solicited from state directors of vocational education, state directors of community colleges, and executive secretaries of state vocational education advisory committees.

Two hundred and three institutions across the nation were nominated as examples of successful articulation; fifty-nine per cent were public community colleges; thirty-three percent were technical institutes, career centers or area vocational schools; five per cent were four year postsecondary institutions and the remaining three percent were proprietary schools. One industrial firm was included in the latter category.

From the larger number, 22 sites were then selected for closer study. Selection was based on

geographic distribution as well as eleven other variables hypothesized to influence the articulation process:

1. type of community
2. size of community
3. age of institution
4. size of institution
5. local governance structure
6. state governance structure
7. type of state board organization
8. source of financial support
9. percent of state taxes devoted to education
10. community average annual per capita income, and
11. growth rate of the region.

Between July and September of 1977, two-person visitation teams composed of a member of the study's advisory committee and the project director interviewed an average of 20 to 25 institutional administrators, faculty, students and community representatives at each of the 22 selected sites.

Of the 22 sites visited, nine were found to be practicing successful articulation when judged by the 10 criteria formulated by the national advisory council: Prescott, Arizona; Rome, Georgia; Milwaukee, Wisconsin; Fort Dodge, Iowa; Fort Worth, Texas; Battle Creek, Michigan; Williamsport, Pennsylvania; Johnstown, New York; and Belleview, Washington.

Five in-depth case studies were eventually prepared for the final AACJC/AVA study, based on interview results, data gathered during the site visits and follow up telephone interviews. The remaining sites, while free of serious shortcomings insofar as articulation was concerned, were found to lack one or more practices which would have otherwise qualified their programs as exemplary. Specific examples of innovative articulation techniques from all 22 sites are, however, included in Chapter 6 of the final report. Copies of that report can be obtained by writing to the American Vocational Association.

CASE STUDIES IN ARTICULATION

IT MAKES LITTLE SENSE for educational institutions *not* to articulate, but the countervailing pressures to such cooperation are often overwhelming — given the barriers imposed by the sub-divisions of our educational system, each with its own administrators, faculty, philosophy, curriculum and advisory bodies. These units must recognize the common need to work together and then acknowledge that cooperation must occur among individuals as well as institutions. Articulation agreements, whether formal or informal, are strengthened as the process flows outward from the institution and its staff to the community at large.

In the following five cases, differing external circumstances led to the recognition of the need for articulation. To some extent the variables of size, wealth, tradition, geography, type of control and student needs affected the degree of articulation. However, none of these factors was as significant as the other variables of leadership, and degree of commitment to the principle of articulation.

BELLEVUE SUBURBAN MODEL

Bellevue Community College (BCC), just over a decade old, serves a student population of more than 7,000 (3300 FTE, 4700 part-time). BCC is part of the 68,000 member community of Bellevue, a suburb of Seattle with a long history of energetic educational leadership. Median family income stands at nearly $19,000 and 47 percent of the community's inhabitants have occupations that are professional, highly technical, managerial or administrative in nature.

As a part of the Seattle metropolitan area, Bellevue has been confronted with the dual problems of limited fiscal resources and an interest in modest growth. Pressured, in part, by cancellation of the Boeing SST project, the area has successfully diversified its economic interests since the early 1970's. Area educational funding has remained constant.

In a state where local bond issues frequently are in trouble, Bellevue has lost only one in the past ten years.

Governance

In Washington, there are two separate boards governing post-secondary vocational education under the coordinating direction of the State Commission on Vocational Education: (1) the Common School (K-12) Education Board and, (2) the Community College Educational Board. Commissioners and boards are appointed by the governor.

The state government's major role has been to define the functions of the separate types of institutions offering vocational education. High schools offer traditionally comprehensive programs, both academic and vocational. Vocational-technical institutions are structured strictly along occupational lines and the state advisory board assures that their offerings are functional, not comprehensive. The institutes provide the link between secondary schools and occupations requiring short-term technical training. The community colleges, on the other hand, have the dual responsibility of being comprehensive and responsive to special community training needs as well. In 1977, 46 percent of the state's community college enrollments were vocational in nature. The state community college board coordinates, sets policy, and provides 80 percent of the operating budget for the 22 community college districts.

Within these demarcations of responsibility, the state government provides an unusual element of flexibility which encourages articulation. There are no area residence requirements, aside from state residence, for admission to vocational-technical institutes and community colleges. The state, in fact, regularly publishes a statewide course directory so that students may take advantage of course offerings throughout the state — without paying extra fees.

NEVAC Curriculum

The Bellevue area has a strong tradition of local initiative which has contributed significantly to articulation. Acting on the recommendations of the Washington Council of Local Administrators of Vocational Education (WCLA), the state-funded Northeast Vocational Advisory Council (NEVAC) undertook the task of developing a curriculum articulation model for the community colleges, vocational-technical institutes and public schools. BCC took a leadership role as a member of NEVAC. To

create the model, NEVAC surveyed both enrollment and vocational course offerings in order to identify and compare program profiles.

In its second phase, the NEVAC study identified three subject areas for concentrated attention: business and office education; child development; and health occupations. In the third phase of the project, 24 instructors from these disciplines representing both secondary and post-secondary institutions set parameters for the courses and developed materials to take back with them.

The instructors specified career clusters which made up their curriculum areas and decided to develop job titles, career ladders and competence standards for each rung of each ladder in secretarial and clerical; nursing and health support; and child development careers.

In the fourth phase, descriptive materials were produced. (See Exhibit I) A matrix was designed for each career step clearly outlining: the local schools that were offering the necessary training; the required credentials (state exams, licenses, academic or professional degrees); the form of training; a list of sample employers; competency and expectation checklists for each career ladder position; the courses, if any, that the career person would have to take; and the individual's "team role" or place among fellow workers.

Positive Results

The next step in the NEVAC study was to match the materials (career ladder expectations and competency checklist, and assessment techniques) with course offerings in the various schools. Major benefits emerged:

- The progression of competencies allowed for mapping of core course so that it could be determined how well programs are outlined to meet career ladder requirements.
- The progression provided teachers with planning aids for their courses and an overview of each course's place in the whole program.
- The materials served as counseling aids for students, parents and counselors.

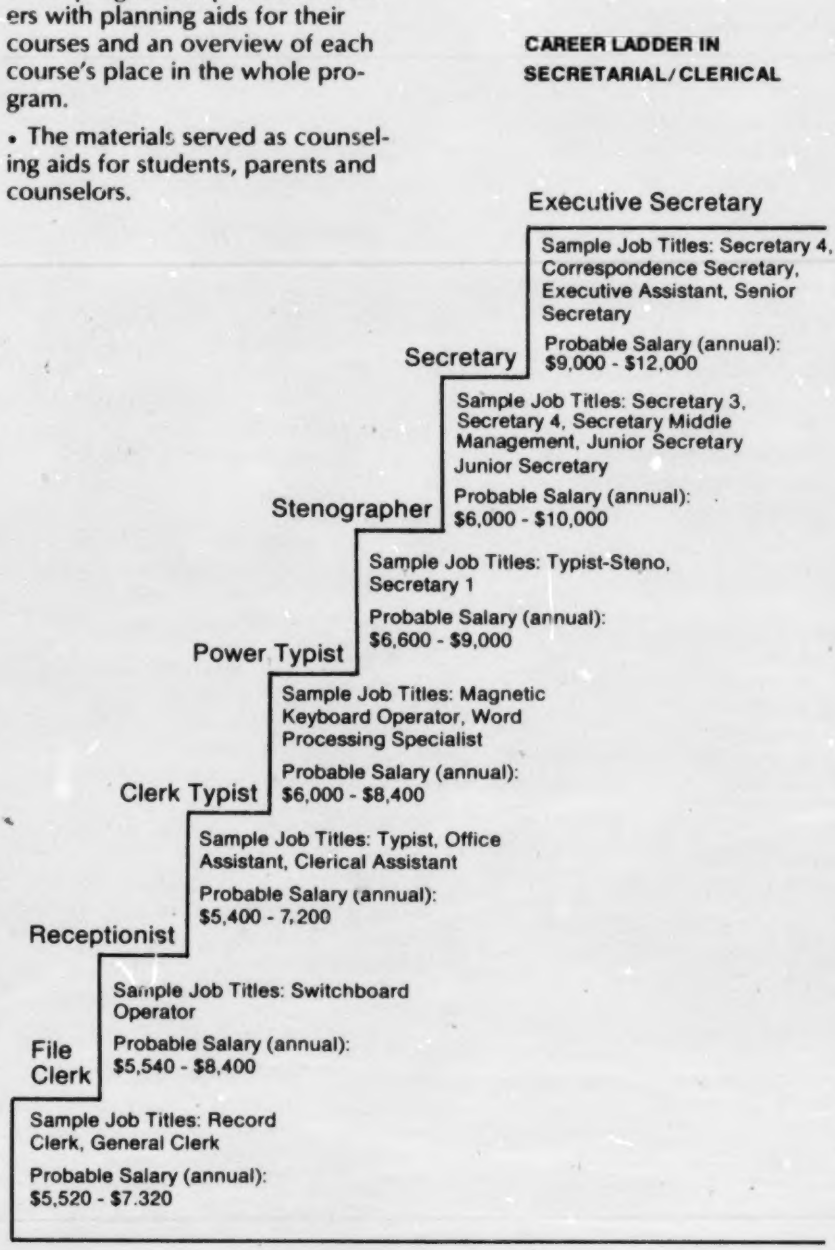
CAREER LADDER IN SECRETARIAL/CLERICAL
Executive Secretary
Sample Job Titles: Secretary 4, Correspondence Secretary, Executive Assistant, Senior Secretary
Probable Salary (annual): $9,000 - $12,000
Secretary
Sample Job Titles: Secretary 3, Secretary 4, Secretary Middle Management, Junior Secretary
Junior Secretary
Probable Salary (annual): $6,000 - $10,000
Stenographer
Sample Job Titles: Typist-Steno, Secretary 1
Probable Salary (annual): $6,600 - $9,000
Power Typist
Sample Job Titles: Magnetic Keyboard Operator, Word Processing Specialist
Probable Salary (annual): $6,000 - $8,400
Clerk Typist
Sample Job Titles: Typist, Office Assistant, Clerical Assistant
Probable Salary (annual): $5,400 - 7,200
Receptionist
Sample Job Titles: Switchboard Operator
Probable Salary (annual): $5,540 - $8,400
File Clerk
Sample Job Titles: Record Clerk, General Clerk
Probable Salary (annual): $5,520 - $7.320

Exhibit I

Source: Suver et al., *Development Of a Curriculum Articulation Model Between Vocational-Technical Institutes, Community Colleges, and School Districts.* Olympia, Washington: Washington State Commission for Vocational Education, July, 1976.

Further Benefits

Beyond the valuable curriculum and counseling materials prepared by the instructors and introduced into the schools, the joint study effort bore additional fruit. The formal and informal cooperation that existed in the past was strengthened at the instructor level. Although no exchange of teachers takes place, the schools now cooperate in in-service training for their instructors, and exchange visits to demonstrate new equipment and materials.

These cooperative efforts have, in turn, extended communication among vocational educators within the regional system. While advisory boards are still separate for each institution,WCLA members representing all educational levels meet regularly.

Finally, there was a mutual agreement to continue the curriculum workshops for a second year. NEVAC administrators expanded the program to bring professionals from the occupational fields into the curriculum planning process. Besides validating the first set of career ladders, NEVAC plans to develop new ladders for data processing and accounting, as well as criteria for advanced placement in vocational courses.

Overview

The Bellevue experience identifies three elements common to successful articulation: clearly identified institutional goals; the capacity of leadership to deal with conflict; and the degree of structured cooperative effort with organizations. Program or curriculum content goals were clearly identified for the community colleges, the vocational technical institutes and the secondary schools in King County. Since areas of overlap were already identified, program leaders were free to initiate state and regional meetings to discuss articulation and to follow through on recommendations resulting from these meetings.

As a result of local initiative, cooperative efforts by teachers from varying institutions was encouraged. Their work on skill sequencing, leading to standardization of instruction, admissions and transfer procedures then made it possible to rationalize educational offerings. Bellevue educators, beginning with a shared belief that the community's vocational needs and resource limitations were common ground for joint effort, have proven that cooperation can and does lead to improved educational opportunities for the student.

WILLIAMSPORT'S PROGRAM

The only community college in the state to combine secondary and postsecondary services, the Williamsport Area Community College (WACC) serves as an outstanding example of a no-frills, minimally financed but highly successful articulation model. The college serves 20 public school districts in a largely rural 10 county region in north central Pennsylvania with a combined population of over 440,000. Population is sparsely distributed in the forests and farmlands of the north and is more concentrated near Williamsport; one of the chief urban centers in the south-central area with a population of 40,000.

The economy of the region is based on a stable work force, a steady but modest growth rate, and a diversified industrial base. Median family income, according to the 1970 census, averages $8,600. Unemployment in 1977, however, was a relatively high eight per cent. Area residents look to WACC as a bulwark against the tide of continuing unemployment.

The Williamsport Area Community College was established in 1965, but its response to vocational education needs dates back to 1919 when the school board set up a training program for disabled servicemen of World War I.

Vocational-technical education for adults was added to the program in 1920, and in 1941 the adult education program and the vocational high school program merged into the Williamsport Technical Institute (WTI). The Institute provided many training programs. Among its satisfied sponsors were such groups as the United Mine Workers and the State Council for the Blind. By the 50's, the Institute had earned an international reputation and became a popular training center for foreign educators who enrolled to study methods of vocational education.

As a result of the Pennsylvania Community College Act of 1968, WTI was given a new structure and renamed Williamsport Area Community College. In addition to the operation of its in-town campus, WACC was given the responsibility for maintaining training facilities at the county airport for aviation courses, and establishing forestry and earth science courses elsewhere.

Governance

Under the provisions of the Pennsylvania Community College Act, the State Board of Education has the authority to approve the establishment of a college. Colleges are, however, locally controlled by independent boards of trustees. They serve their own specific geographic regions.

WACC is presently sponsored by 20 school districts, and governed by a 15-member board of trustees, elected by the sponsor districts' Boards of Education. Sponsoring district residents receive the benefits of lower tuition

and admission preference, and each sponsoring district is a direct shareholder in the College.

Financing

WACC's 1976-77 operating and capital budget was almost $7 million. Operating costs are shared equally by the sponsoring school districts, the state and the student. The 20 district sponsors may raise revenues through local taxes. The student portion is met through tuition and fees. Capital costs are split between the sponsors, assessed on relative market value, and the state. Like the majority of community colleges, WACC has suffered in recent years from a combination of inflation and flattening of enrollments.

Student Population

WACC's 1977 student population includes 1,500 secondary vocational students; 3,200 degree and certificate students (2,600 fulltime, 600 part-time) enrolled in day programs; and 2,250 non-credit community and continuing education students in night classes. Some 55 percent of the postsecondary students come from non-sponsoring districts in other parts of Pennsylvania, other states and some foreign countries. Forty-five percent come from the 10 counties in the region. Ninety-five percent are in career oriented programs, and only five percent are transfer oriented. Significantly, enrollment of the 3,000 non-credit community and continuing education students is not included in WACC's budget. Community education has a separate fund and operates on a self-sustaining basis with no financial support from sponsor districts or the state.

Secondary Articulation

Pennsylvania requires all of its school districts to offer vocational programs. High schools in WACC's service area fulfill this requirement by contracting with WACC for services provided on its campus. This articulation program is unique in the state. The secondary vocational programs are arranged on a rotating schedule. High school students are bused to WACC where they attend classes for two or nine weeks. They then spend an equal amount of time at their home high schools. This structure allows interprogram scheduling and minimal duplication of facilities, equipment and programs, and has resulted in reduced operating costs. WACC's cost of $792 per year per secondary student is substantially below the average cost per pupil of $1,000 for vocational education throughout the state.

The vertical movement of students from high schools to WACC is facilitated by the close link between the college and its sponsoring districts which have cooperated in establishing a preferential admissions policy. WACC's secondary students are given first priority in enrollment in WACC postsecondary programs; graduates of the secondary program can continue at WACC with advanced credit and earn an associate degree or certificate with only one additional year of school.

Cooperation of Administrations

Articulation is enhanced by the interinstitutional meetings of WACC officers, administrators and staff with various groups representing the public schools and postsecondary institutions in the area. WACC's dean of secondary instructional services chairs a professional advisory committee made up of local school district superintendents and other officials of the community college's district school systems to exchange information on vocational programs. An executive council composed of school board representatives for the 20 sponsoring districts and WACC board members oversee policy decisions. Information and ideas are regularly exchanged among school and college counselors, principals and other staff. A blue ribbon committee offers guidance on all vocational education offerings of the college. Separate advisory committees for each occupational program have also been established.

Postsecondary Articulation

Postsecondary instructional services involve many positive linkages with other institutions and with industry.

WACC offers job training and job sharing as a postsecondary instructional service program in a variety of fields including business and computer sciences, transportation, building construction and earth sciences. Two students share one job and rotate instruction with work. Each instructor develops a set of learning objectives for individual students, coordinates with employers and is responsible for monitoring progress and grading performance at work and at school.

Although most students at WACC do not transfer, those that do can do so with credit for their WACC courses, because of formal articulation agreements with neighboring four-year colleges. WACC students may also cross register to take courses at local colleges. When cross registration is equal, no fees are levied. In the field of cosmotology, WACC has arranged contracts with two private schools for the provision of cosmotology training.

WACC, in turn, accepts course credits of students transferring from other area vocational technical schools. Students can also gain credit for life or work experience upon passing a competency exam.

WACC provides additional training for industry and the community through co-sponsored courses. In the past, the school has worked with Williamsport Hospital, Piper Aircraft, the State Department of Health and various unions to provide apprentice training. Last year, WACC offered 23 13-week programs in fire science, demonstrating new techniques for local fire departments.

Fees are shared by students and participating industries. The resulting low tuition is a strong incentive for student entry, and the programs benefit WACC by guaranteeing the fullest use of its facilities.

If employment is an articulation outcome measure, then one of WACC's outstanding statistics is its placement record. Most 1975 WACC graduates found employment despite a poor economy. Seventy-four percent indicated they were working in their fields of training, another nine percent transferred to other colleges to continue their education and 12 percent were employed in other fields. Only four percent were unemployed, and starting salaries averaged $7,500.

The above figures come from WACC's extensive follow-up of former students. Its survey covers statistical data on the number of students graduating in various programs, those employed in or out of their fields, employed out of state, unemployed, transferring to other colleges, and average starting salaries. A comparison of the college programs and the employment outlook for the next seven years (through 1985) is also reviewed, using Department of Labor data. The total information is assembled for easy reference and is distributed to high school counselors, division directors and the State Department of Education.

Placement Services

WACC's philosophy is that employment is directly related to WACC training, but placement cannot be left to chance. Graduates should be given the best employment assistance that time and staffing can provide. The College's placement services include a one-hour career placement seminar given to students before they graduate. The placement director coordinates with 30 firms located within a 100-mile radius of the College. These firms visit the campus to recruit. An estimated 35 to 40 percent of the graduates find their first job through leads given them by the College and its faculty.

Overview

Williamsport Area Community College's successful articulation stems from its response to local training needs. The cooperation between WACC, district public secondary schools, industry, private proprietary schools, other colleges and hospitals ranges from formal written contracts to advisory committee participation and informal one-to-one contracts. WACC offers examples of both vertical and horizontal articulation, easing the progression of students through training into the work force and back again.

BATTLE CREEK MANDATE

The Calhoun Area Vocational Center (CAVA) and the Kellogg Community College (KCC) face each other across a common pond in Battle Creek, Mighigan. This physical proximity symbolizes the realization of a carefully prepared long-range plan for vocational education articulation. In 1962, the area had no vocational center. Business and industrial leaders and school officials were concerned because high school graduation was the end of educational training for 70 percent of the area's youth. The community college, founded in 1956, offred some occupational programs, but emphasized comprehensive studies rather than skill training. KCC responded to the recommendations of a community-sponsored Committee of 100 on vocational-technical training needs by conducting a feasibility study for area vocational service. The resulting report, *Patterns for Progress*, offered a blueprint for cooperation.

The report concluded that area vocational centers should provide education for high school graduates or dropouts, quality occupational preparation for those still in high school, retraining, part-time supplementary training for employed persons and counseling for youth and adults with funds for the capital and operational expenses provided by the intermediate districts. Policies should be set by an advisory board composed of school administrators, members of boards of education, and appointed representatives of business, industry and labor. In 1967, the three-county Calhoun Intermediate District approved establishment of the Calhoun Area Vocational Center, which then opened in 1970.

Kellogg Community College and Calhoun Area Vocational Center serve a largely urban and industrial Michigan area with a population of 180,000. In 1970, the median family income was $8,946. The median number of years of education was 11.5. The community college currently enrolls 4500 students. The Area Vocational Center has an enrollment of 1,200 and serves 15 area high schools in a three-county area.

Since the opening of the Calhoun Center, it has operated under contractual agreement with the College to share facilities and articulate programs. Administrators, with approval of their boards, sub-

mitted a joint proposal to the Michigan Department of Education in 1972 for funding of a demonstration project on articulation of career development education.

The joint articulation project was funded ($381,244) by the state department of education for three and a half years (1973-1976). The proposal identified significant barriers to articulation in career education as:

- A delivery system for education which was in reality a series of nearly autonomous subsystems that included local K-12 districts; intermediate school districts; area vocational centers; adult and community education offices; community colleges; and colleges and universities;
- The teaching faculty in each of these units typically operated in isolation from one another;
- Vocational advisory committees functioned independently of one another;
- Courses and curricula in the various units had not been coordinated into sequential experiences;
- Inadequate recognition was given to prior learning gained outside the standard academic setting through work experience, military training programs, apprenticeships, and proprietary schools;
- Inadequate attention to post-employment needs for job improvement and career changes.

Progress in Articulation

The progress in articulation made possible by the project was substantial. A plan was developed permitting students to continue college programs at the level they had reached in the Vocational Center programs. A policy was established for providing college credit for prior experience, whether acquired at the Vocational Center, in the military, on the job or in public and private school training.

KCC shared its learning resources center with the Area Vocational Center, making it possible for the center staff to produce instructional slides, filmstrips, videotapes and graphics without duplication of equipment and personnel. The College assumed primary responsibility for most post secondary education programs and adult education. Students enroll in the adult program through the College, pay their fees, then take courses at the Vocational Center. The Center, in turn, offers intensive training in a variety of occupations for adults from 4 to 10 p.m.

Adults also attend classes during the day at CAVC whenever openings occur in the regular high school programs. To prevent overlap, review committees were set up to examine performance objectives and develop learning modules. Formal agreements stated that students at the Vocational Center who reach certain performance levels do not have to repeat the work after transfer to KCC. These agreements now cover 16 different program areas and 200 learning modules that can be used by either institution.

KCC has produced curriculum guides which allow students to fill exact requirements of a university or college to which they wish to transfer. These guides are actually signed contracts with department heads of universities stipulating course requirements. KCC now has contracts with 11 universities. This is believed to be the first time that transfer curriculum has been agreed upon in advance between a community college and a receiving institution.

Cooperative Effort

CAVC's guidance staff and counselors at area high schools and Kellog Community College have also developed a common career decision guide to provide information to students at the high school as well as the postsecondary level. With assistance from the Michigan Employment Commission, all schools now have from one to three full-time placement persons available to help students find employment.

With regard to planning, representatives from all vocational educational education programs with the three-county area meet monthly to articulate their courses. This coordinating committee — made up of 20 members representing labor, business, vocational teachers, and student minorities — reviews current programs and approves new ones.

A policy advisory committee which includes representatives of the high school districts also meets monthly. Calhoun Area Vocational Center is represented in the Area School Masters Association, a group of school administrators who are concerned with vocational education as well as other matters. CAVC and KCC jointly sponsor vocational teacher training programs for their own staffs as well as for the local high schools.

Overview

Articulation at the two institutions seems to be proceeding effectively. In 1976, an outside three-member team evaluated the three and one-half year old articulation project and noted such positive results as the initiation of communication channels, development of innovative teaching methods, adoption of competency-based education concepts, shared use of personnel, equipment and materials, and cooperation in the place-

ment of students. The community initiated push for cooperation has now been institutionalized.

KCC And CAVA are currently responding to the reactivated Committee of 100's recent needs assessment report. Concentrating on a new, non-traditional population, the institutions are cooperating in further articulation agreements for the benefit of the adult continuing education student.

JOHNSTOWN ARTICULATION

The small, ten-thousand member community of Johnstown is a population center for three largely rural and sparsely populatted counties near the foothills of the Adirondacks in New York State. Like many other rural areas, the counties surrounding Johnstown have suffered from high unemployment (11.5 percent in 1977) and an economic slump as major industries moved south, attracted by lower taxes. Median family income, $9,300 in 1977 and median years of education, 11.4 in 1977 are lower than the national average ($14,958 and 12.4 years). Against this background, it is not surprising that 50 percent of the high school graduates take some form of postsecondary educational training to improve their employment prospects.

Students in Hamilton, Fulton and Montgomery Counties in New York who are seeking such training are reaping the benefits of a mutually profitable arrangement between Fulton Montgomery Community College (FMCC) and the Board of Cooperative Education Services (BOCES). Both serve high school districts of the three-county area. To understand the cooperative efforts, it is necessary to know about each agency's part in New York State's educational structure.

Fulton Montgomery Community College was established in 1963 in Johnstown as one of 30 comprehensive community colleges operating under the State University of New York (SUNY). FMCC's governing structure starts with the SUNY Board of Trustees, which approves the establishment of a college, the academic curricula of all of the colleges, tuition and fee schedules, the budget submitted by the local boards, and the nominations of presidents. Local control is maintained, however, by the sponsoring agency (usually the county board) or college boards of trustees.

FMCC is run by a nine-member board of trustees chosen from citizens living in the sponsorship area, four appointed by the governor and five by the local sponsor. A student-elected representative sits as a tenth member. The local board appoints personnel, prepares the budgets, adopts the curriculum and establishes tuition and fees according to legal guidelines.

The sponsoring community contributes about 28 percent of FMCC's funding; state aid is approximately 37 percent and student revenue 31 percent.

Cooperative Board

Authorized by the state legislature in 1948 and originally established to provide small rural school districts with such specialized services as art, music, and driver education, the Boards of Cooperative Education Services have grown to become focal points for delivery of vocational education in New York. BOCES exists independently of the school districts which it serves, provides only services requested by the district, and operates under its own board of education. Funding comes directly from the districts, the state or the federal government, with local district expenditures reimbursed the following year through a state aid formula.

Marriage of Convenience

The common bond between these two very different educational structures was the growth of a mutual concern for effective delivery of vocational education. In the late 1960's, the BOCES district superintendent for Johnstown joined local school districts to encourage FMCC to offer technical education. The expansion served two purposes: It was a solution to the college's declining enrollment and it filled a local void in postsecondary training.

A cooperative base had been established as early as 1964 when BOCES agreed to allow FMCC to use its data processing equipment and facilities to automate student records and business operations. When FMCC later obtained a computer, it was housed in the BOCES facility. For a nominal fee, FMCC attained a fully operative data processing center and BOCES gained a completely equipped educational facility for training secondary students in data processing.

Voluntary sharing agreements expanded in 1967 when FMCC agreed to extend access of BOCES students to personnel and facilities at its new Enrichment Center for a federally funded school district project. The project involved the development of curricular materials in local history and non-western cultures.

After federal funding expired in 1970, the school districts requested BOCES to assume operation of FMCC's Enrichment Center and, with local funding, expand the project, and make it the in-service training unit for school districts.

When FMCC started technical programs in 1972, BOCES offered technical assistance in setting up the programs and obtaining faculty. In addition, BOCES offered to share trade and technical shops.

Formal agreements were made in 1974 which allowed the college to use BOCES facilities on a daily basis after the regular secondary day program was completed and prior to the adult evening programs. Service costs were allocated by formula, and costs of equipment and supplies were shared by both agencies.

Curriculum Articulation

As early as 1970, BOCES joined FMCC in an effort to extend educational opportunities. Creation of a graduate program was the first target. In 1970, BOCES became the regional teacher certification office. Local teachers were required to complete graduate courses in order to maintain certification, but there were no certified programs in the area. BOCES, therefore, supported FMCC's efforts to establish off-campus graduate courses at FMCC in cooperation with four-year institutions. Five graduate schools are now offering courses at FMCC year round.

Advanced Placement

From this first step of articulation, BOCES and FMCC moved to specific institutional arrangements. The BOCES program in data processing and advanced business machines was similar to several of the business courses required by FMCC for an associate degree.

It was also felt that granting college credit for work completed at BOCES during high school would spur student interest. A joint committee reviewed the matter. It recommended that any student successfully completing the one-year data processing or business machine program at BOCES should be granted 6 semester hours of college credit at FMCC, provided they received the recommendation of a BOCES instructor. Thus, high school students were given advanced placement for regular high school courses. By 1977, the agreement had been extended to five other course areas.

Most recently BOCES and FMCC have cooperated in adult education and apprentice training through adult vocational evening classes. Each agrees to a rational separation of responsibilities with the result that BOCES operates the hands-on aspects and FMCC generally handles the classroom-theory.

Authorized by the state to provide apprentice training in trade and technical occupations, BOCES offers programs in electricity, auto mechanics, automotive body and fender repair, welding, graphic arts and building trades. With the support of trade unions, FMCC and BOCES have worked out a system whereby apprentices may complete their 144 hours of instruction at BOCES with the appropriate credits transferred to FMCC for application to the associate degree preparation.

Plans call for an articulated program in nursing education. Efforts are under way to establish transfer of partial credit from BOCES' LPN program to FMCC's registered nurse program so that, with one additional year of collegiate study, a BOCES graduate could obtain the associate degree and licensure as a registered nurse.

Liaison by Committee

The joint committee structure is an ongoing feature of BOCES/FMCC's articulation process. In 1975, a permanent liaison committee consisting of the comptroller, dean of students and dean of career education from FMCC and the director of occupational education and assistant superintendent for BOCES was established. The committee meets on a monthly basis and covers a wide range of issues from budgeting and advanced placement through future planning.

Recommendations are submitted to the heads of both institutions and, if required, then to the boards of trustees. It is felt that the use of the permanent liaison committees reduces problems and keeps crisis situations to a minimum. It is particularly important that the members of the committee are at the middle management level and carry both the authority and responsibility to settle the issues involved.

Both the College and BOCES had long established community-based craft advisory committees for each vocational program, and an overall advisory committee but they operated separately. In 1977, the BOCES/FMCC liaison committee suggested the combination of craft committees and the establishment of a combined general advisory committee. Presently, the appropriate committees are functioning well. The joint committees have also had a unique practical benefit. Dual service makes more efficient use of a members' time; almost 100 percent attendance has resulted since members are required to attend only one meeting rather than two.

Overview

Starting with informal support arrangements in the 60's, BOCES and FMCC have established an elaborate community articulation network over the years. With advanced placement, apprentice training agreements, shared use of shop facilities and the Enrichment Center, the Johnstown model serves as an example of cost-cutting without reduction in the quality of service.

MILWAUKEE URBAN NEEDS

The largest metropolitan area in Wisconsin, Milwaukee has fared better than much of the rest of the nation during the recent period of

high unemployment. In December of 1976, the unemployment rate was 4.8 percent, well below the national figure of 7.8 percent. The median family income of $10,980 (according to the 1970 census) compared well with income levels across the state, as did its median education level of 12.1 years. The city has, however, had its share of pressing concerns.

While low by national standards, the unemployment rate was substantially higher than this skilled and blue collar laboring city had experienced from 1970 through 1974. In spite of a diverse economic base sustained by small engine and heavy machine manufacturing, brewing and printing, increasing industry demand for more sophisticated persons with more sophisticated job skills coupled with structural unemployment among the young and the 10 percent minority populations, have posed problems for vocational educators.

Fortunately for its residents, Milwaukee has long had a deep belief in the value of vocational education, stemming from the cultural background of its heavily European immigrant population. As a result, the city supports, with substantial state cooperation, an all-inclusive institution devoted to vocational and technical entry skills, retraining, remedial or special education, transfer courses and continuing adult education for enrichment. The Milwaukee Area Technical College (MATC) serving 73,000 full and part-time students, ages 16 to 80, through 185 programs and 2,300 individual courses, stands out as one of the finest articulation models in the nation.

The Milwaukee Area Technical College District, one of 16 districts in the Wisconsin system of vocational, technical and adult education, is the smallest in geographical area but the most populous with its 1.2 million residents. What is now the Milwaukee Campus was supported by the City of Milwaukee until 1969, when the district concept was authorized by state law. MATC's district, composed of 21 high school districts in the area, includes the comprehensive downtown Milwaukee campus and three smaller specialty campus centers in the south, west and north of the district which offer specialized programs in technical, industrial, agribusiness, health, service, and business occupations.

Governance

Wisconsin's educational governance system has been a major factor in MATC's achievements since 1969. Unlike most other states, Wisconsin does not have a single community college system: it has two — the University of Wisconsin Center system, with 13 degree-granting centers and a statewide extension network, and the Vocational, Technical and Adult Education system (VTAE), made up of 16 VTAE districts which operate 36 technical institutes and 500 outreach centers. The state superintendent of schools, the president of the University of Wisconsin's Board of Regents, and the president of the state VTAE Board sit on the boards of both systems, insuring articulation at the highest level. The Wisconsin Board of Vocational Technical and Adult Education governs the statewide system of vocational, technical and adult education and administers federal and state funds for vocational education. The individual schools are operated by the districts, autonomous municipal taxing units governed by locally appointed boards.

The statutory authorities vested in the state and district boards complement one another. The state board has responsibility for the approval, development, maintenance and supervision of occupational programs above the secondary and baccalaureate levels, including adult education and apprentice training. The seven-member MATC district board (two employee representatives, two employer representatives, two at-large representatives and a public school representative) approve the annual budget and set the tax rates and levies for the MATC District.

Local autonomy remains strong, since 16 districts provide 46 percent of the financial support for postsecondary vocational education in Wisconsin. Twelve percent of the remaining funds come from the federal government, 20 percent from the state, and the rest from fees and tuitions.

The rationalization of goals and programs provided by this system of separate but linked governing units has established a pervasive climate for cooperation.

Internal Articulation

MATC articulation with high schools and other postsecondary institutions has occurred mainly in the areas of advanced placement, coordination of instructional programs and continuing education courses, and shared facilities.

However, all such cooperative arrangements have been aided by MATC's own integrated structure composed of four separate yet related campuses, each with its own specialties. The downtown Milwaukee campus is the most comprehensive. It offers classes for adult high school and general education programs. The North Campus at Mequon emphasizes agribusiness. The South Campus Center in Oak Creek is largely devoted to district-wide industrial and technical programs, and the West Campus Center in West Allis specializes in small engine repair. Each of the facilities provides a business curriculum since the ne-

cessary equipment is not as expensive as other specialties and the need for business skills is evenly distributed throughout the district.

Major articulation benefits result from this use of a specialty campus approach. It promotes: more efficient and economical use of facilities, resources and personnel; the elimination of duplication in programs requiring expensive equipment; the integration of ethnic and minority groups because of assignment and scheduling of programs throughout the district; and site and program flexibility because of decentralized, non-comprehensive locations.

Cooperation with Schools

Articulation with high schools began with the formation of the MATC District in 1970 by the state legislature. The College then established a system of high school contract services. MATC furnishes teachers and facilities for public high school students who enroll and receive credit for specialized classes at MATC by agreement with school administrations. Contractual agreements worked out by MATC also provide services such as the evaluation of job skills developed, exploratory work experiences and diagnostic work-related experience. Participation has nearly doubled since 1970-71, when MATC served 544 students. In 1976, 945 students from 13 districts were enrolled.

The "early leaver" program, another example of service, enables students who have completed the eleventh grade and have satisfied graduation requirements to enroll in diploma or associate degree training programs, receive credit for work successfully completed at MATC and still graduate with their high school classes.

MATC staff work closely with vocational counselors and teachers to develop high school courses that dovetail with post-secondary vocational-technical programs at the college. High school graduates can bypass basic typing, shorthand and technical drafting courses when they successfully complete a competency-based challenge examination. Commercial art students can bypass commercial art courses in a similar manner.

Since its initial advanced placement agreement in 1971, MATC has worked continuously to expand such options for qualified students. A pilot articulation project at Oak Creek High School has resulted in a graphics curriculum that enables Oak Creek graduates to receive credit for up to six courses. A MATC instructor and two science teachers at Nathan Hale High School are developing an advanced placement program for graduates enrolling in an MATC program which requires natural science courses; and in the area of computer science, some high school contract students are receiving both high school and college credit.

MATC's most ambitious effort at providing rationalized and cooperative service to high school populations is a Youth Skill Center which will be built when federal funds become available. The Center will serve youths 14 to 18 years of age providing exploratory experiences in vocational-technical careers as well as training in specific skills.

Although providing a full range of job guidance services, cooperative on-the-job training opportunities with industry and placement services, the Center will *not* replace high school curriculum. Students attending will be required to take academic courses at their high school.

Advanced Standing

MATC allows students advanced standing with: the transfer of credit from technical institutes, colleges or universities; and/or the evaluation of work experiences and non-traditional education experiences that have been gained from correspondence or extension courses, military training programs, educational television courses, college-level work completed in high school, apprenticeship, on-the-job training or independent study. Evaluation depends on either departmental review, passing challenge exams, or presenting satisfactory scores on College Level Equivalent Program Tests (CLEP). Advanced standing options are a major part of MATC's efforts to allow each and every student the fullest possible opportunity to enter training at the most beneficial point.

An encouraging answer to the problem of remedial needs is Crossover. It helps students to improve basic academic skills before college entry. Career counseling is provided along with assistance in reading skills, study techniques, communication skills and mathematics. Significantly, the courses carry regular credit that can be applied to the programs the students eventually enter. Over 70 percent of those who have crossed over have successfully completed the program.

MATC now has agreements with the University of Wisconsin-Milwaukee, Marquette and Nova universities which allow these institutions to offer courses at MATC regional campus centers as long as the courses do not conflict with MATC's. Such shared use of facilities is regarded as a significant method of cost reduction.

MATC has joined with seven other colleges and universities in the area to form the Metro Milwaukee Consortium to reach adults not reached through traditional recruiting methods. The

various learning opportunities offered by all of the institutions have, as a result of the consortium's work, been compiled in a catalogue and widely distributed throughout the area.

Urban Outreach

During 1977-78, MATC cooperated with employers and the State Division of Apprenticeship and Training to provide related instruction for 348 apprentices who completed their indentures to become journeymen in diverse trades. In this same period, MATC also conducted 42 training courses (some as short as 3 to 6 weeks) at the request of business and industry. Such short-term courses offer substantial economic benefits to MATC since they are scheduled when facilities would not otherwise be occupied.

As the Department of Labor's approved skill center for Comprehensive Employment and Training Act (CETA) funds, MATC is the coordinator of these federally funded programs in its district. MATC taught English and technical skills to some of the 23,000 Vietnamese who moved to the Milwaukee area.

MATC officials note that all of these community outreach programs serve as feeders for some of the college's more conventional educational offerings. Students exposed to MATC by these sessions often become students in Crossover, or specific vocational programs.

Surveys for Improvement

Individually, and in cooperation with other institutions, MATC periodically conducts various surveys. Long before detailed planning for a new program begins, MATC's division of instructional services surveys business, industry and agencies as well as employers in the field to determine the need for the program, current and future job opportunities, minimum training requirements, starting salaries and other necessary data.

MATC's placement center conducts thorough follow-up surveys of graduates at six-month, two-and-a-half year, and five year intervals to determine the number employed in their chosen field, the number unemployed, salaries and wages and related information. The survey data is sent to all district high schools and job service organizations, and annual reports are also issued on the wages and salaries of graduates. MATC recently assisted the Center for Studies in Vocational and Technical Education, UW-Madison, in a federally funded overview project, "Systems Approach to Assessment and Evaluation of Post-secondary Education." Periodic surveys of employers and assessment need surveys of all high school districts also provide essential data for further articulation of curriculum.

Advisory Committees

Articulation has been successful in Milwaukee because of MATC's ability to establish an effective communication system with business, industry, labor, other educators and educational administrators. One of the most important links in the communication chain is MATC's use of advisory committees.

Internally, MATC has a Blue Ribbon Committee which meets yearly to assess the college's progress in meeting its overall goals and objectives. In addition, advisory committees have been established for each of MATC's vocational technical programs. When questions arise on the need for a new occupational program, MATC forms an ad hoc committee to assist in preparing recommendations for a program proposal which is submitted to the state VTAE Board. A fourth type of advisory panel is used to judge the adequacy of programs for apprentices.

Since MATC sees its primary mission as that of occupational education with emphasis on hands-on training, constant contact with a wide world of business and occupational groups is deemed essential to fulfill the college's goal of staying abreast of changes and emerging needs. Composed of community leaders, business and industry representatives, educators and employees, each of MATC's advisory committees has played a significant role in furthering the institution's responsiveness to both student and community.

On the state level, MATC has cooperated since 1972 with other VTAE schools and the University of Wisconsin system on two joint administrative committees. The joint administrative committee for academic programs evaluates present and future programs that lead to a degree, diploma or certificate before they are considered by the Wisconsin Board of Regents or the Wisconsin Board of VTAE. The joint administrative committee on continuing education evaluates present and future non-credit programs in order to avoid unnecessary duplication. Service on each committee allows MATC initial input and influence in the statewide articulation process.

Overview

Response to community needs is Milwaukee Area Technical College's major goal as reflected in the words of Robert L. Cooley, first Director of the Milwaukee Vocational School:

"Our time is your time. Your needs determine our curriculum." Extending from secondary education through lifetime learning, MATC's educational mandate and performance are proof that a comprehensive institution can also be cost conscious, cooperative and efficient.

CONCLUSIONS AND RECOMMENDATIONS

STATES ARE TAKING ON increased responsibility for insuring local coordination of vocational education. It has been the general assumption that a state plan for coordination in conjunction with volunteer interinstitutional consortia can achieve effective and mutually beneficial linkages. It is not enough, however, to promote an attitude of mutual respect and cooperation. Articulation can most successfully be achieved where institutions voluntarily cooperate because each stands to benefit. It is our belief that as these initial efforts mature and expand, interinstitutional dependence will grow stronger. In the end, the needs of the local community, individually and organizationally, will be better served.

The recommendations that follow are the product of five regional and one national conference where over 500 local and state officials met to examine key issues. Many of the recommendations were tied to five topics: finance, improvement of data systems, multiple educational needs, barriers to interinstitutional cooperation, and credentialing and credit.

FINANCE

Issue: The shift in federal financial policy from institutional support to direct funding of students together with a leveling off of federal appropriations for vocational education has led to increased competition among local vocational institutions for students.
Discussion: As federal policy has shifted its emphasis from institutional to student support, increasing competition for students has put pressure on institutions to offer an array of programs and services. Expansion of existing programs or the offering of new ones cost money. Unfortunately, to systematically determine a community's needs and to insure an adequate response costs even more dollars. The issue of survival is at stake. The degree to which articulation can occur under stringent budgetary conditions is a matter that deserves earliest attention.

Tight educational budgets at both the state and local levels together with the high cost of vocational education have limited the availability of student services. Adequate counseling services are essential. Placement services are a must. Developmental or remedial education programs are sorely needed.

As states have moved to comply with recent court rulings (not to mention increasingly burdensome federal reporting requirements), little in the way of additional monies to help cover such costs has been made available. This fact, coupled with federal appropriations which have reached a plateau, has added to already overburdened local and state appropriations.

Federal Level Recommendations

Funding formulas for postsecondary occupational educational programs need adjustment to provide a proper emphasis on articulation. While there may be a number of models which reinforce interinstitutional cooperation, most have yet to be thoroughly evaluated in terms of their potential contribution. Funds should be made available for this purpose through the N.I.E. five year evaluation study of Vocational Education.

Given the fact that for the past seven years federal support for vocational education has declined in relation to other manpower training and education priorities, budget requests for FY '79 should be raised from an estimated $430 million to $630 million. Program improvement and support services should be expanded from the estimated $107.5 million to $157.5. Such services include support for research and the development of exemplary and innovative programs.

State Level Recommendations

Since local institutional competition can inhibit articulation practices, regional approaches need to be tested with regard to fiscal support patterns or models.

Current manpower development programs-- such as CETA-- with their pass-through provisions in support of local prime sponsors need to reflect through joint planning and budgeting procedures at the state level the potential contribution that vocational education programs and facilities can make to be statewide manpower development effort.

State and local officials should be advised as to the long-term financial obligations likely to be incurred at the time a new occupa-

tional program or vocational education facility is being considered. A careful inventory of already existing programs and facilities may help to avoid overbuilding.

Issue: Past emphasis in vocational education on secondary programs has led to insufficient funding of postsecondary programs.

Discussion: Growth in vocational education enrollments reflects the fact that both traditional and nontraditional students want to qualify for higher level occupational opportunities. Both community colleges and area vocational schools during the 60's helped to give added impetus to the expansion of enrollments at the postsecondary level. The passage of the Vocational Education Act of 1963 and its various amendments has served to broaden the scope of vocational education and its appeal to students of all ages. Unfortunately, state and federal expenditures have not kept pace with the spiraling costs of postsecondary vocational education.

Among the arguments in support of alternative strategies for expanded funding of vocational education is the suggestion that funds be allocated by programs. Special interest groups have advocated percentage set-asides of federal funds for postsecondary vocational education or have advocated that state coordinating bodies be given responsibility for a more equitable allocation of federal funds. Less attention, however, has been given to the argument that funds should be allocated on the basis of demonstrated need.

Federal Level Recommendations

Congress should provide some way of expanding support for postsecondary vocational education with built-in assurances that federal funds will not be allocated primarily on the basis of level of education. Such a mechanism should cover both postsecondary and adult vocational education. (Such funds should be under the aegis of the State Board of Vocational Education so that they can be distributed in the most equitable way).

State and Local Recommendations

State Coordinating Boards for Vocational Education should set up regional coordinating bodies to determine needs and encourage the full use of resources to respond to them.

DATA SYSTEMS

Issue: The absence of a national uniform data system has hindered the expansion and articulation of vocational education at the postsecondary level.

Discussion: The growth in programs and expenditures has increased the need for information on which to judge the impact of federally supported programs, mandated by the Educational Amendments of 1974 and 1976. A major responsibility is to determine how well the needs of employers, employees, the unemployed, the underemployed, women and other target groups are being met. The setting up of a National Occupational Information Coordinating Committee (NOICC), and its counterpart at the state level (the SOICC), was specifically aimed at helping states to devise compatible data networks for the purpose of improving the planning of vocational education.

A uniform reporting and accounting system must serve several masters-- Congress, U.S. Office of Education, National Center for Educational Statistics, and state and local administrators. Each has concerns that must be reflected in the formulation of an improved strategy for encouraging inter institutional cooperation and coordination.

At the state level, the State Board of Education collects and reports data; the State Board of Higher Education or its equivalent gathers data; and the State Manpower Services Council oversees the CETA sponsored programs and collects data on programs and enrollments. The challenge is to somehow unite these three efforts.

Focusing on postsecondary occupational education in particular, earlier efforts to design state level data systems were based primarily on the need to evaluate how well the needs of state residents were being served. Since then, however, there has been an increasing interest in matching demand with the supply of programs and services. More recently, program "output" and competency data are being emphasized in a number of states.

Among the data requirements of local administrators interested in better articulation is the need for information on potentially overlapping occupational programs in a given region, students in need of training, types of services required, and institutions or facilities available. Most local administrators also need training in the use of education and manpower data for planning purposes.

Federal Level Recommendations

NOICC and SOICC provisions in the Educational Amendments of 1976 and in CETA should be fully funded. The benefits to be realized will more than offset the modest cost ($10 million per year) for building an adequate national data network.

The Educational Amendments of 1976 mandated a new set of responsibilities for interstate cooperative education projects. The provisions for implementing this action need to be built into state plans for gathering data on both

the demand and supply of occupational education within and between states.

Federal, regional, and state forums should be sponsored periodically by the federal government so that information can be exchanged on the gathering and interpretation of data for planning. Such forums should be based on systematic needs assessment surveys and regional or statewide employment projections.

The Congress should authorize and appropriate full funding of Title III of the current pending CETA legislation in order to put local educational agencies and postsecondary institutions into a position where they can be of assistance to prime sponsors.

State Level Recommendations

State coordinating boards should require the publication of a list of all occupational programs and their sponsoring institutions to assist students in identifying where programs are available and to assist planners in pinpointing where unnecessary gaps or overlaps occur.

Local guidance and placement counselors at both secondary and post-secondary levels should be throughly familiar with the occupational programs of the institutions in their areas. Such persons also need to be trained to conduct employer surveys, follow-up surveys of graduates, and in the effective use of manpower data.

Across the board accountability for placement of vocational education graduates places a severe burden on those programs and institutions having responsibility for the training of the handicapped and disadvantaged. Consideration should be given to further refinement of the criteria for judging the success of vocational training as it relates to the potential achievement of selected target groups.

Program based cost accounting as currently proposed by the new Vocational Education Data System (VEDS) would give consumers and taxpayers a much needed mechanism for making cost comparisons among local programs and institutions. Further refinement of the VEDS system is needed to separate out those costs associated with vocational education activities from those in related areas that should not be directly identified as vocational education.

VOCATIONAL EDUCATION

Issue: The role of vocational education within the larger sphere of education needs to be clarified. What is the relationship between vocational and adult education, between vocational education and academic education, and most importantly, between vocational and career education? Should the primary emphasis be on preparing students for entry into the world of work or should vocational education be concerned with giving people of all ages opportunities for pre-, in-service, and post-career training?

Discussion: What type of training should be provided, at what age levels, and in what form? Should educators be content to teach entry level job skills so that students can become self-supporting at an early age or should they be concerned with helping students sort out and qualify for longer term careers?

In the interest of offering as many options as possible, some form of orchestration of programs must be implemented at the local level if students are to be free to exercise choices and make decisions. Students will differ not only in terms of training needs but in terms of their financial resources and time available for training. Artificial barriers to programs should be eliminated-- both for traditional and non-traditional students.

The goals and programs of vocational education as currently interpreted must also be examined from the perspective of the coming role of work and education in America. Intensifying competition, particularly among young adults for better jobs, continued shifts towards expanded service occupations, changing mix of students enrolled in postsecondary occupational education programs (fewer white males and more females and minorities) — all of these factors suggest that institutions most likely to succeed are those that can respond flexibly to this changing market. One of the strategies that is advocated throughout this report is, of course, more effective interinstitutional cooperation. An open market economy is one where much of the freedom of choice and response to institutionally provided occupational opportunities are in the hands of prospective students. Such a market will force area vocational schools, technical institutes and community colleges to expand their range of services in order to take on the increasingly tough educational chores — that of remediating and adapting to the learning abilities and skills of students of all ages who wish to improve their qualifications for work.

Federal Level Recommendations

The U.S. Office of Education should through the Bureau of Occupational and Adult Education develop a data bank of competencies needed by individuals to enter or qualify for work in a broad range of occupations. Appropriate criteria for assessing whether or not

these competencies are achieved would also be required.

The U.S. Office of Education and the National Institute of Education should consider the development of guidelines for incorporating competency objectives into vocational education curricula, including the development of life skills. Such objectives should be geared to the various levels of education, e.g. secondary, postsecondary, and adult, as well as to the career goals of the individuals concerned.

State Level Recommendations

State administrators should be encouraged to convene periodic state-wide and regional workshops to explore the missions and programs of postsecondary vocational education institutions. Such issues as the relationship of vocational education to other forms, the shifting needs of consumers, the philosophy of vocational education, and the role of state governing and coordinating boards for vocational education would be discussed.

State leaders should take an active role in developing a system of vocational education outcome measures for use by local school districts.

State administrators should set up in-service training programs for vocational education teachers, counselors, and administrators, directed toward improving communications and joint planning among local or regional secondary and postsecondary institutions.

Local Level Recommendations

Open entry-open exit programs often facilitate student access to programs at times convenient to them. Programs should be organized into modulized units of instruction, with each unit having its own set of criterion referenced tests, to enable instructors to adapt their course offerings to individual student preferences and prior learning and experience.

By means of a community-wide "truth in advertising" campaign, local education and training institutions should convey to interested parties the scope and nature of the occupational offerings available, the prerequisities to be met before enrollment, the cost, the probable outcomes, the time involved, and the transferability of credits received to other institutions.

Local secondary and postsecondary institutions should collaborate in seeking funds for the purpose of jointly planning and articulating their curriculum programs.

Local vocational educators should accept responsibility for communicating to employers, parents, and students that the development of vocational skills is a lifetime process. Institutions in the area should meet to orchestrate a set of coordinated programs designed to serve the needs of people at various stages in their working careers.

INTERINSTITUTIONAL

Issue: Program articulation is viewed by some as simply enlightened self-interest. Achieving successful articulation among two or more institutions requires leadership, resources, and a plan. How to implement such plans in a variety of settings, some hostile, some receptive, is a process requiring skill and commitment.

Discussion: Improved program coordination at the state, regional, and local level was clearly the most pressing concern of participants in the five regional and the national conference. The orderly progression of students from one level of education to another or from one program to another requires a well-developed, carefully conceived plan for building collaborative relationships. The dilemma faced by the more traditional institutions is that they must compete for the nontraditional student with proprietary schools, CETA sponsored programs and even industry itself. We have argued that the best way for traditional institutions to compete is to cooperate.

Sorting out who is to provide what to whom has become over time the responsibility of state governing and coordinating boards of vocational education. However, new state commissions, some without the participation of professional educators, have taken on stronger policy making roles. What should be the role of state agencies and boards, and federal government, and various national interest groups in supporting a policy of interinstitutional cooperation without usurping the legitimate responsibilities of those charged at the local level with serving educational needs?

Federal Level Recommendations

The Educational Amendments of 1976 (Title II of 94-482) should be amended to permit a portion of each state's basic vocational education grant to be used to encourage or support interinstitutional coordination at the regional or local level. Such support would be analagous to the provisions under Title III of the Higher Education Act of 1965.

The Bureau of Adult and Vocational Education of USOE should develop guidelines which would encourage state and local advisory and governing boards to jointly and voluntarily establish policies and procedures for articulation.

AVA and AACJC should continue to exert leadership, provide models, and promote articulation policies and guidelines for use at state and local levels. The advice

and counsel of the AVA/AACJC Joint Advisory Committee should be retained in order to continue the cooperation of the two agencies on behalf of promoting the goals and benefits of vocational education.

State Level Recommendations

State manpower advisory councils, state boards of vocational education, state commissions on vocational education, state advisory councils on vocational education, and other agencies or commissions have some responsibility for vocational education should work together jointly to establish a policy statement encouraging local articulation.

Using federal funds for strengthening and improving programs and support services in vocational education as authorized by 94-482, coordination between the legislative and the administrative branches of the state government should be enhanced.

Vocational education plans should emphasize the need for improved articulation and offer incentives to local districts. As states undertake their annual reviews of statewide plans for vocational education, such interstate agencies as the Education Commission of the States and regional accrediting organizations could be looked to for assistance in developing articulation plans.

Local Level Recommendations

Articulation planning should begin with specific activities which have been well worked out in two or more local institutions from the standpoint of procedures. Such activities as recruitment, admissions, and the evaluation of credit offer logical areas in which initial agreements can be worked out.

Articulation efforts should involve the personnel who must deal directly with problems. Appropriate representation needs to be solicited from those institutions involved. Student as well as staff views are needed to achieve a well-rounded perspective.

Consideration should be given to the establishment of an overall administrative coordinating committee to adjudicate issues that are unresolved at lower administrative levels — a court of last resort.

All forms of interinstitutional cooperation and communication should be encouraged. Newsletters, visits between campuses, follow-up interviews with transfer students, routine feedback of performance data on transfer students and working graduates represent possible ways of insuring effective communication.

Formal articulation programs should include a means for providing periodic evaluation by some outside agency or group. The criteria for evaluation should focus on the process strategy, the personnel involved, the appropriateness of activities worked out, and evidence of concrete achievement.

CREDENTIALING AND CREDIT

Issue: Non-traditional, older, career oriented students are demanding, and getting, credit for prior learning. Modifying the current system to accommodate these demands while at the same time maintaining appropriate standards is a major concern.

Discussion: With the increased acceptability of educational credentials as a measure of a job applicant's qualifications, the question of how accurately such credentials reflect an applicant's true skills needs to be examined. It is a matter of importance to both educational and industrial establishments.

The shift in enrollment away from younger to older, part-time students has pointed up the need for procedures to more accurately reflect the experiences and backgrounds of students.

But integrity of the institutions involved must be preserved. Critical issues remain as to who should decide what credit is to be given and how, and what role and responsibility should licensing groups, accrediting agencies, employers, and unions play in setting criteria.

The adoption of the procedures necessary to implement the granting of credit for prior learning run counter to well entrenched institutional interests. It possesses a threat to already established program requirements and implies a need for more individualized and modularized curriculum materials. In addition, it introduces a whole new set of fiscal problems. The more credit awarded for prior learning, the lower the F.T.E. allow-

ance. Ways of determining and allocating the not insignificant costs of performance testing and assessment need to be worked out.

Too many higher educational institutions discriminate against students who do not plan to complete a baccalaureate degree.

There is also the issue of the varying requirements that institutions impose on students enrolled in the same occupational training program. The number of credit hours required, subject matter mix, and prerequisites frequently vary from one institution to another.

On matters of evaluation testing, students entering into a post-secondary institution are frequently not given the opportunity to demonstrate their occupational competencies or to "challenge" a course in order to qualify for advanced placement in it. The practice of advanced placement is hampered by complicated qualifying procedures, concerns of sending institutions over loss of F.T.E.'s through dual enrollment and the reluctance of receiving institutions to honor prior credits for the same reason.

Federal Level Recommendations

AVA and AACJC should publicize exemplary practices of awarding credit for prior learning now under development by such groups as the Cooperative Assessment of Experiential Learning (CAEL) and the American Council on Education's Task Force on Educational Credit and Credentials.

Guidelines for implementing performance standards for new and emerging occupations need to be established and support given to developing new curricula built to meet the specifications of these performance standards.

Congress should consider support of a national study of the fiscal implications of alternative ways of funding the awarding of credit for life experience.

State Level Recommendations

State level administrators should work out appropriate criteria for awarding credit for knowledge and skills already acquired, regardless of how they were acquired, with licensing groups, accrediting agencies, and other special interest groups.

Minimum competency standards should be worked out for all relevant occupations in a particular state.

State level agencies should support through grants and contracts the development of models and procedures for awarding credit for life experience.

Local Level Recommendations

Institutions should clearly communicate their policies of awarding advance credit to students through challenge exams or other procedures. Sending and receiving institutions should agree in writing on procedures to be adopted.

Appropriate staff members of cooperating institutions should meet periodically to exchange information on curriculum programs and requirements, identify common learning objectives, compare notes on their respective assessments of job entry level skill requirements, and review procedures being used in awarding credit for prior learning experiences.

Procedures should be worked out whereby receiving institutions agree to accept credits previously awarded by the sending institutions. This suggests that all faculty concerned be jointly involved in the establishing of performance criteria for given courses in selected occupational fields.

Appropriate methods for charging students for advanced credit received through challenge exams or other means need to be worked out so that local institutions are not penalized for adopting more flexible credit awarding procedures.

FINAL COMMENT

There is much to be done if effective coordination and cooperation in vocational education is to be achieved on a nationwide basis. Some very significant steps have been taken in many parts of the country — suggesting that the task is not an impossible one.

The AVA-AACJC joint study makes a significant contribution to understanding of the problems and needs. It has brought about vital discussion of ways to resolve them. Appropriate follow-up steps must now be taken.

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